Paper No. 46

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HEINZ K. MACHO
AND KLAUS D. HUNGENBERG

Appeal No. 96-1879
Application 08/006,194[1]

HEARD: AUGUST 5, 1997

Before McCANDLISH, Senior Administrative Patent Judge, and LYDDANE and NASE, Administrative Patent Judges.

LYDDANE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's refusal to allow claims 20 through 26 and 28 through 43, which are all of the claims pending in the application.

[1] Application for patent filed January 19, 1993. According to applicants, this application is a continuation-in-part of Application 07/205,319, filed June 10, 1988, now abandoned.

The subject matter on appeal is directed to a test carrier and to a method of manufacturing a test carrier. Claims 20 and 38 are exemplary of the invention and read as follows:

20. Test carrier for analysis of a liquid sample, said test carrier comprising

a first absorbent layer having a surface,

a second absorbent layer having a surface facing said surface of said first absorbent layer, and

an array of dots of hot melt adhesive connecting said surfaces of said first and second layers, said array comprising at least 25 dots per cm^2, wherein said dots of hot melt adhesive have a dimension perpendicular to said surfaces which keeps said surfaces spaced apart by a gap of 0.05 to 0.2 mm, said dots and said gap being dimensioned such that a liquid sample can pass from said surface of said first absorbent layer to said surface of said second absorbent layer.

38. Method of manufacturing a test carrier for analysis of a liquid sample, said method comprising

providing a first absorbent layer having a surface and a second absorbent layer having a surface,

applying hot melt adhesive to the surface of said first layer by a pressurized gas spray to form a filamentary array of adhesive, and

applying said surface of said second layer against said array so that said surfaces are spaced apart by a gap of capillary dimensions.

The references of record relied upon by the examiner in a rejection of the claims under 35 U.S.C. § 103 are:

Hiratsuka et al. (Hiratsuka) (EPA `365)	0 166 365	Jan. 2, 1986
Blatt (EPA `883)	0 287 883	Oct. 26, 1988

Applicants' Admitted Prior Art, page 4, lines 3-8; page 6, lines 10-17; and pages 11 and 13.

Claims 20 through 26 and 28 through 43 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hiratsuka in view of appellants' admitted prior art and Blatt[2].

Rather than reiterate the examiner's statement of the above rejections and the conflicting viewpoints advanced by the examiner and the appellant, we refer to pages 2 through 13 of the examiner's answer, pages 4 through 17 of the appellants' brief, and to the supplemental reply brief filed March 13, 1995 (Paper No. 42)[3] for the full exposition thereof.

[2] We have chosen to follow the conventional practice of the U.S. Patent and Trademark Office by identifying EPA '365 and EPA '883 by the surname of the first listed inventor named each in these references.

[3] We note that the reply brief filed November 21, 1994 (Paper No. 39) was denied entry by the examiner and thus has not been considered by this panel of the Board.

OPINION

At the outset we note that, contrary to the examiner's statement on page 2 of the answer, the copy of the claims appearing in the appendix to the appellants' brief is not a correct copy of the claims. Firstly, that copy does not include the amendments to claims 20, 34 through 37 and 39 through 41, nor cancellation of claim 27, as per the amendment filed August 15, 1994 (Paper No. 34). Secondly, the copy of claim 38 appearing in the appendix incorrectly recites "a gap of 0.05 to 0.2 mm" in the last line thereof. We note that while independent claims 20, 26 and 28 were amended subsequent to final rejection (Paper No 29, dated April 11, 1994) to incorporate this recitation, claim 38 was not.

In arriving at our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art, and to the respective positions advanced by the appellants and by the examiner. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is insufficient to establish a *prima facie* case of obviousness with respect to all claims on appeal. Our reasoning for this determination follows.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993); In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). A prima facie case of obviousness is established by presenting evidence indicating that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed combination or other modification. See In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Furthermore, the conclusion that the claimed subject matter is prima facie obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988), In re Lalu, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1984); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986), and ACS Hosp, Sys., Inc. v.

Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

Additionally, rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner has the initial duty of supplying the factual basis for the rejection. The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968). Our reviewing court has repeatedly cautioned against employing hindsight by using the appellants' disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings in the prior art. See, e.g., Grain Processing Corp. v. American Maize-Prods. Co., 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

Our review of the evidence of obvious applied by the examiner in the rejection of the claims on appeal reveals that a test carrier comprising first and second absorbent layers attached to one another by adhesive patterns is disclosed by Hiratsuka, that hot melt adhesive is known in the art to attach

layers of test carriers together as admitted by appellants, and that a test device utilizing a capillary gap between a support layer and an absorbent test layer is disclosed by Blatt. However, even assuming arguendo that it would have been obvious to one having ordinary skill in the art to utilize hot melt adhesive for the adhesive connection of the microporous layers of Hiratsuka, we find no suggestion or motivation from the applied prior art or from knowledge generally available to those of ordinary skill in the art to form a capillary gap as taught by Blatt between the microporous layers of Hiratsuka.

Contrary to the examiner's position on page 6 of the answer that Hiratsuka discloses "that the thickness of the adhesive could be up to ten times the thickness of the microporous sheets (layers)" and that "[s]uch a thickness of the adhesive dots would have produced a gap between the layers, Hiratsuka discloses, in the paragraph spanning pages 7 and 8, that the

> adhesive area ratio, namely, a ratio of the area occupied by the adhesive in the pattern of Fig. 1 (such as dots, lines, etc.) to a unit surface area can be given as in the printing technology field. . . . In the present invention, the adhesive area ratio is theoretically not higher than 90%, and preferably not higher than 50% and most preferably not higher than 20% from the viewpoint of allowing uniform and smooth passage of a liquid. The size of dots and width of lines of the pattern are so adjusted

> to be in harmony with the thickness of the microporous sheet to be combined. Generally, the size or width of the pattern is not more than approx. 10 times (preferably not more than approx. 4 times) as much as the thickness of the microporous sheet. Thus, the size and width of the pattern is preferably as small and thin as possible, as far as the desired tight fixation of the microporous sheets is attained. The appropriate space between the dots or lines can be determined experimentally so that no capillary action is produced between the combined two microporous sheets [emphasis added].

It is apparent from the above quoted passage from Hiratsuka that the "up to ten times the thickness of the microporous sheets" the examiner has referred to is not the thickness of the adhesive but it is the area on the surface of the microporous layer occupied by the adhesive.

The clear disclosure of Hiratsuka throughout, and as particularly apparent from the passage quoted above, is that "tight fixation of the microporous sheets" be attained "so that no capillary action is produced between the combined two microporous sheets" (emphasis added). Consequently, it is our opinion that Hiratsuka teaches away from the proposed combination with the teaching of Blatt of the formation of a capillary gap between a test layer and a base layer.

As stated in W.L. Gore & Assocs. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984):

> [t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

It is our conclusion that the only reason to combine the teachings of the applied prior art in the manner proposed by the examiner results from a review of appellants' disclosure and the application of impermissible hindsight. Thus, the examiner has not established a prima facie case of obviousness, and we cannot sustain the examiner's rejections of appealed claims 20 through 26 and 28 through 43 under 35 U.S.C. § 103.

Since we have determined that the evidence of obviousness is insufficient to establish a prima facie case under 35 U.S.C. § 103, it has not been necessary for this panel of the Board to address the declaration of Heinz K. Macho filed pursuant to the provisions of 37 CFR § 1.132 as evidence of nonobviousness.

Accordingly, the decision of the examiner rejecting claims 20 through 26 and 28 through 43 under 35 U.S.C. § 103 is reversed.

REVERSED

HARRISON E. McCANDLISH, Senior Administrative Patent Judge	)	
WILLIAM E. LYDDANE Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JEFFREY V. NASE Administrative Patent Judge	)	

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